

PLUS 4/9/04

**Butler, Douglas**

---

**From:** PLUS  
**Sent:** Wednesday, April 07, 2004 9:22 AM  
**To:** Butler, Douglas  
**Subject:** PLUS Results for 10724759

Here are the PLUS search results for 10724759.

This search was prepared by the staff of the Scientific and Technical Information Center, SIRA. If you have questions or comments about this search, please reply via email to PLUS@uspto.gov.



10724759\_QUAL.txt



10724759\_LIST.txt



10724759\_WEST.txt



10724759\_EAST.txt



10724759.cast



10724759\_CLS.txt



10724759\_CLSTITLES.txt



10724759\_WDS.txt

x

10724759\_LIST

PLUS Search Results for S/N 10724759, Searched April 07, 2004

The Patent Linguistics Utility System (PLUS) is a USPTO automated search system for U.S. Patents from 1971 to the present. PLUS is a query-by-example search system which produces a list of patents that are most closely related linguistically to the application searched. This search was prepared by the staff of the Scientific and Technical Information Center, SIRA.

5868315	6075428	4770089
6170522	6155607	4853057
4432080	6161514	4878467
4491225	6286820	4888095
5213167	6536635	4925469
5400860	6595318	4979629
5664478	6619523	4985121
5796061	5923750	5023925
5851269	5203455	5178327
5947738	5964194	5189255
4267855	6112752	5197081
4268945	6241219	5217697
4289014	4289079	5275290
4294324	4325151	5294014
4332427	4398499	5310160
4374606	4432668	5332393
4384847	4767262	5344183
4392632	5007403	5378014
4404831	5209471	5389065
4414443	5225258	5410459
4415949	5634766	5426933
4429633	5700689	5477819
4461430	5743708	5486154
4466646	5782116	5546075
4469047	6076494	5545559
4505597	6234132	5632565
4530224	6371240	5655642
4599884	4261931	5716110
4850263	4265839	5741128
4854555	4270692	5768909
4919547	4277014	5771302
4957028	4279373	5823889
4986764	4280651	5827385
5214241	4280649	5864190
5225631	4295034	5922252
5238160	4294589	5944494
5305930	4317224	5954113
5318262	4318067	5985482
5362065	4351451	6019638
5387780	4388785	6085664
5442915	4400010	6095886
5448831	4449270	6105484
5454254	4466888	6142887
5487495	4475759	6182464
5511433	4497628	6192762
5516260	4540911	6199415
5560280	4572375	6244977
5695350	4583932	6322056
5737925	4604876	6379241
5746612	4607499	6418565

10724759\_EAST

(5868315  
6170522  
4432080  
4491225  
5213167  
5400860  
5664478  
5796061  
5851269  
5947738  
4267855  
4268945  
4289014  
4294324  
4332427  
4374606  
4384847  
4392632  
4404831  
4414443  
4415949  
4429633  
4461430  
4466646  
4469047  
4505597  
4530224  
4599884  
4850263  
4854555  
4919547  
4957028  
4986764  
5214241  
5225631  
5238160  
5305930  
5318262  
5362065  
5387780  
5442915  
5448831  
5454254  
5487495  
5511433  
5516260  
5560280  
5695350  
5737925  
5746612) .pn.  
(6075428  
6155607  
6161514  
6286820  
6536635  
6595318  
6619523  
5923750  
5203455

10724759\_EAST

5964194  
6112752  
6241219  
4289079  
4325151  
4398499  
4432668  
4767262  
5007403  
5209471  
5225258  
5634766  
5700689  
5743708  
5782116  
6076494  
6234132  
6371240  
4261931  
4265839  
4270692  
4277014  
4279373  
4280651  
4280649  
4295034  
4294589  
4317224  
4318067  
4351451  
4388785  
4400010  
4449270  
4466888  
4475759  
4497628  
4540911  
4572375  
4583932  
4604876  
4607499).pn.  
(4770089  
4853057  
4878467  
4888095  
4925469  
4979629  
4985121  
5023925  
5178327  
5189255  
5197081  
5217697  
5275290  
5294014  
5310160  
5332393  
5344183  
5378014

10724759\_EAST

5389065  
5410459  
5426933  
5477819  
5486154  
5546075  
5545559  
5632565  
5655642  
5716110  
5741128  
5768909  
5771302  
5823889  
5827385  
5864190  
5922252  
5944494  
5954113  
5985482  
6019638  
6085664  
6095886  
6105484  
6142887  
6182464  
6192762  
6199415  
6244977  
6322056  
6379241  
6418565) .pn.

10724759\_CLS

Most Frequently Occurring Classifications of Patents Returned  
From A Search of 10724759 on April 07, 2004

Original Classifications

4 206/.5  
3 415/115  
2 70/209  
2 123/184.42  
2 173/162.2  
2 280/728.3  
2 435/290.1  
2 439/139  
2 473/374

Cross-Reference Classifications

5 239/59  
4 229/120  
4 239/57  
3 123/184.61  
3 229/125.125  
2 70/226  
2 92/130A  
2 92/63  
2 162/374  
2 174/35R  
2 220/239  
2 220/592.27  
2 229/125.19  
2 242/566  
2 261/DIG 88  
2 267/122  
2 267/64.27  
2 277/653  
2 277/919  
2 277/920  
2 277/921  
2 280/741  
2 415/191  
2 415/209.2  
2 415/209.3  
2 473/354  
2 473/370  
2 473/606  
2 524/908  
2 525/232  
2 525/236  
2 525/237  
2 D23/366

Combined Classifications

5 239/57  
5 239/59  
4 206/.5  
4 229/120  
3 92/63  
3 123/184.61  
3 229/125.125  
3 280/728.3

10724759\_CLS

3 415/115  
3 473/606  
2 70/209  
2 70/226  
2 72/148  
2 92/130A  
2 92/48  
2 102/531  
2 123/184.42  
2 123/184.47  
2 162/352  
2 162/374  
2 173/162.2  
2 174/35GC  
2 174/35R  
2 220/239  
2 220/592.27  
2 229/125.19  
2 239/56  
2 242/566  
2 261/DIG 88  
2 267/122  
2 267/64.21  
2 267/64.24  
2 267/64.27  
2 277/646  
2 277/653  
2 277/919  
2 277/920  
2 277/921  
2 280/732  
2 280/741  
2 384/100  
2 415/191  
2 415/209.2  
2 415/209.3  
2 435/290.1  
2 439/139  
2 473/354  
2 473/370  
2 473/374  
2 524/908  
2 525/232  
2 525/236  
2 525/237  
2 D23/366

10724759\_CLSTITLES

Titles of Most Frequently Occurring Classifications of Patents Returned  
From A Search of 10724759 on April 07, 2004

5 239/57 (1 OR, 4 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/34 SLOW DIFFUSERS  
239/57 .With support for porous or apertured encasing  
means

5 239/59 (0 OR, 5 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/34 SLOW DIFFUSERS  
239/58 .With means to adjust casing porosity or  
openings  
239/59 ..By alignment of apertured members

4 206/.5 (4 OR, 0 XR)  
Class 206 : SPECIAL RECEPTACLE OR PACKAGE  
206/.5 INFUSION CONTAINING

4 229/120 (0 OR, 4 XR)  
Class 229 : ENVELOPES, WRAPPERS, AND PAPERBOARD BOXES  
229/100 PAPERBOARD BOX  
229/120 .With venting or ventilation means

3 92/63 (1 OR, 2 XR)  
Class 092 : EXPANSIBLE CHAMBER DEVICES  
92/61 RELATIVELY MOVABLE WORKING MEMBERS  
92/62 .First working member moves second coaxial  
working member through separating abutment surfaces  
92/63 ..With separate biasing means for a working  
member

3 123/184.61 (0 OR, 3 XR)  
Class 123 : INTERNAL-COMBUSTION ENGINES  
123/184.21 INTAKE MANIFOLD  
123/184.61 .Manifold material or composition

3 229/125.125 (0 OR, 3 XR)  
Class 229 : ENVELOPES, WRAPPERS, AND PAPERBOARD BOXES  
229/100 PAPERBOARD BOX  
229/124 .With closure for an access opening  
229/125.01 ..Nonunitary closure (i.e., not of one-piece  
construction with the box)  
229/125.12 ...Laterally slidable closure element (i.e.,  
slides across access opening)  
229/125.125 ....Sleevelike closure element

3 280/728.3 (2 OR, 1 XR)  
Class 280 : LAND VEHICLES  
280/29 WHEELED  
280/727 .Attachment  
280/728.1 ..Inflatable passenger restraint or confinement  
(e.g., air bag) or attachment  
280/728.3 ...Deployment door

3 415/115 (3 OR, 0 XR)  
Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS

10724759\_CLSTITLES

415/115 WITH PASSAGE IN BLADE, VANE, SHAFT OR ROTARY  
DISTRIBUTOR COMMUNICATING WITH WORKING FLUID

3 473/606 (1 OR, 2 XR)  
Class 473 : GAMES USING TANGIBLE PROJECTILE  
473/569 PROJECTILE, PER SE; PART THEREOF OR ACCESSORY  
THEREFOR  
473/604 .Having hollow core or bladder enclosed within  
cover (e.g., basketball, soccer-ball, tennis ball, etc.)  
473/606 ..Cover is composed of feltlike, napped, or  
cloth material (e.g., tennis ball, etc.)

2 70/209 (2 OR, 0 XR)  
Class 070 : LOCKS  
70/57 SPECIAL APPLICATION  
70/174 .For control and machine elements  
70/207 ..Handle, handwheel or knob  
70/209 ...Rotary or swinging

2 70/226 (0 OR, 2 XR)  
Class 070 : LOCKS  
70/57 SPECIAL APPLICATION  
70/174 .For control and machine elements  
70/225 ..Wheel  
70/226 ...Rotation blocking

2 72/148 (1 OR, 1 XR)  
Class 072 : METAL DEFORMING  
72/127 BY DEFLECTING SUCCESSIVELY-PRESENTED PORTIONS  
OF WORK DURING BODILY MOVEMENT THEREOF (E.G., FOR COILING,  
LEVELLING, CURVING OR TROUGHING MATERIAL IN MOVEMENT)  
72/146 .To form spiral coil  
72/148 ..With core inside coil

2 92/130A (0 OR, 2 XR)  
Class 092 : EXPANSIBLE CHAMBER DEVICES  
92/130R WITH SEPARATE BIASING MEANS FOR WORKING MEMBER  
92/130A .Bias normally held inoperative by fluid  
pressure

2 92/48 (1 OR, 1 XR)  
Class 092 : EXPANSIBLE CHAMBER DEVICES  
92/48 PLURAL FLEXIBLE WALL WORKING MEMBERS

2 102/531 (1 OR, 1 XR)  
Class 102 : AMMUNITION AND EXPLOSIVES  
102/530 JACKETED OR CARTRIDGE GAS GENERATOR  
102/531 .For gas-powered tools or means

2 123/184.42 (2 OR, 0 XR)  
Class 123 : INTERNAL-COMBUSTION ENGINES  
123/184.21 INTAKE MANIFOLD  
123/184.38 .For in-line engine  
123/184.42 ..Manifold having plenum

2 123/184.47 (1 OR, 1 XR)

10724759\_CLSTITLES

Class 123 : INTERNAL-COMBUSTION ENGINES  
123/184.21 . INTAKE MANIFOLD  
123/184.47 . Manifold having plenum

2 162/352 (1 OR, 1 XR)  
Class 162 : PAPER MAKING AND FIBER LIBERATION  
162/232 APPARATUS  
162/289 .Running or indefinite length product forming  
and/or treating means  
162/348 ..Flexible endless band type mold (e.g.,  
Fourdrinier)  
162/351 ...Means retarding or controlling drainage  
through mold  
162/352 ....Wire bottom scrappers or deflectors

2 162/374 (0 OR, 2 XR)  
Class 162 : PAPER MAKING AND FIBER LIBERATION  
162/232 APPARATUS  
162/289 .Running or indefinite length product forming  
and/or treating means  
162/363 ..Suction devices  
162/374 ...Wear face structures and materials

2 173/162.2 (2 OR, 0 XR)  
Class 173 : TOOL DRIVING OR IMPACTING  
173/162.1 INCLUDING MEANS TO VIBRATIONALLY ISOLATE A  
DRIVE MEANS FROM ITS HOLDER  
173/162.2 .Handle type holder

2 174/35GC (1 OR, 1 XR)  
Class 174 : ELECTRICITY: CONDUCTORS AND INSULATORS  
174/32 ANTI-INDUCTIVE STRUCTURES  
174/35R .Shielded or screened  
174/35GC ..Gaskets, covers

2 174/35R (0 OR, 2 XR)  
Class 174 : ELECTRICITY: CONDUCTORS AND INSULATORS  
174/32 ANTI-INDUCTIVE STRUCTURES  
174/35R .Shielded or screened

2 220/239 (0 OR, 2 XR)  
Class 220 : RECEPTACLES  
220/200 CLOSURES  
220/233 .Externally adjustable plug or gasket  
220/239 ..Fluid pressure

2 220/592.27 (0 OR, 2 XR)  
Class 220 : RECEPTACLES  
220/592.01 RECEPTACLE HAVING MEANS TO FACILITATE  
MAINTAINING CONTENTS ABOVE OR BELOW AMBIENT TEMPERATURE  
(E.G., COMPARTMENT FOR HOLDING A HEAT EXCHANGE MEDIUM)  
220/592.2 .Thermally insulated receptacle  
220/592.27 ..Vacuum insulation

2 229/125.19 (0 OR, 2 XR)  
Class 229 : ENVELOPES, WRAPPERS, AND PAPERBOARD BOXES  
229/100 PAPERBOARD BOX  
229/124 .With closure for an access opening  
229/125.01 ..Nonunitary closure (i.e., not of one-piece

10724759\_CLSTITLES  
construction with the box)

229/125.19 ...Closure includes a depending flange or tab  
which extends along an adjacent box wall

2 239/56 (1 OR, 1 XR)  
Class 239 : FLUID SPRINKLING, SPRAYING, AND DIFFUSING  
239/34 SLOW DIFFUSERS  
239/53 .Liquid supply in absorbent or porous media  
only  
239/55 ..With enclosing casing  
239/56 ...Pad type

2 242/566 (0 OR, 2 XR)  
Class 242 : WINDING, TENSIONING, OR GUIDING  
242/550 UNWINDING  
242/566 .With particular guide or guard

2 261/DIG 88 (0 OR, 2 XR)  
Class 261 : GAS AND LIQUID CONTACT APPARATUS  
261/DIG 88 AROMA DISPENSERS

2 267/122 (0 OR, 2 XR)  
Class 267 : SPRING DEVICES  
267/113 FLUID  
267/118 .Expansible-contractible chamber device  
267/122 ..Diaphragm or bellows

2 267/64.21 (1 OR, 1 XR)  
Class 267 : SPRING DEVICES  
267/2 VEHICLE  
267/64.11 .Comprising compressible fluid  
267/64.15 ..With retarder  
267/64.16 ...Leveling device  
267/64.19 ....Having flexible wall  
267/64.21 .....Including rolling lobe between telescoping  
members

2 267/64.24 (1 OR, 1 XR)  
Class 267 : SPRING DEVICES  
267/2 VEHICLE  
267/64.11 .Comprising compressible fluid  
267/64.15 ..With retarder  
267/64.23 ...Having flexible wall  
267/64.24 .....Including rolling lobe between telescoping  
members

2 267/64.27 (0 OR, 2 XR)  
Class 267 : SPRING DEVICES  
267/2 VEHICLE  
267/64.11 .Comprising compressible fluid  
267/64.27 ..Having flexible wall

2 277/646 (1 OR, 1 XR)  
Class 277 : SEAL FOR A JOINT OR JUNCTURE  
277/590 SEAL BETWEEN FIXED PARTS OR STATIC CONTACT  
AGAINST RELATIVELY MOVABLE PARTS  
277/628 .Contact seal for other than internal  
combustion engine, or pipe, conduit, or cable  
277/644 ..Particular cross-sectional seal profile

10724759\_CLSTITLES

277/645        ...Hollow or filled chamber  
277/646        ....Inflatable

2 277/653        (0 OR, 2 XR)  
    Class 277 : SEAL FOR A JOINT OR JUNCTURE  
    277/590        SEAL BETWEEN FIXED PARTS OR STATIC CONTACT  
                  AGAINST RELATIVELY MOVABLE PARTS  
    277/628        .Contact seal for other than internal  
                  combustion engine, or pipe, conduit, or cable  
    277/650        ..Particular sealing material or construction

    277/652        ...Distinct sheath or covering  
    277/653        ....Metal

2 277/919        (0 OR, 2 XR)  
    Class 277 : SEAL FOR A JOINT OR JUNCTURE  
    277/919        SEAL INCLUDING ELECTRICAL FEATURE

2 277/920        (0 OR, 2 XR)  
    Class 277 : SEAL FOR A JOINT OR JUNCTURE  
    277/920        SEAL INCLUDING ELECTROMAGNETIC SHIELDING  
                  FEATURE

2 277/921        (0 OR, 2 XR)  
    Class 277 : SEAL FOR A JOINT OR JUNCTURE  
    277/921        CLOSURE OR WEATHER STRIP SEAL

2 280/732        (1 OR, 1 XR)  
    Class 280 : LAND VEHICLES  
    280/29        WHEELED  
    280/727        .Attachment  
    280/728.1      ..Inflatable passenger restraint or confinement  
                  (e.g., air bag) or attachment  
    280/732        ...Deflated confinement located in or on  
                  instrument panel

2 280/741        (0 OR, 2 XR)  
    Class 280 : LAND VEHICLES  
    280/29        WHEELED  
    280/727        .Attachment  
    280/728.1      ..Inflatable passenger restraint or confinement  
                  (e.g., air bag) or attachment  
    280/741        ...Inflation fluid source

2 384/100        (1 OR, 1 XR)  
    Class 384 : BEARINGS  
    384/91        ROTARY BEARING  
    384/100        .Fluid bearing

2 415/191        (0 OR, 2 XR)  
    Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS  
    415/182.1      WORKING FLUID PASSAGE OR DISTRIBUTING MEANS  
                  ASSOCIATED WITH RUNNER (E.G., CASING, ETC.)  
    415/183        .Plural distributing means immediately upstream  
                  of runner  
    415/185        ..Arcuately or circularly arranged around  
                  runner axis  
    415/191        ...Vanes

10724759\_CLSTITLES

2 415/209.2 (0 OR, 2 XR)  
Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS  
415/182.1 WORKING FLUID PASSAGE OR DISTRIBUTING MEANS  
ASSOCIATED WITH RUNNER (E.G., CASING, ETC.)  
415/208.1 .Vane or deflector  
415/208.2 ..Plural and arcuately or circularly arranged  
in radial plane around runner axis  
415/209.2 ...Having means for mounting diaphragm or  
plural vane holder to casing

2 415/209.3 (0 OR, 2 XR)  
Class 415 : ROTARY KINETIC FLUID MOTORS OR PUMPS  
415/182.1 WORKING FLUID PASSAGE OR DISTRIBUTING MEANS  
ASSOCIATED WITH RUNNER (E.G., CASING, ETC.)  
415/208.1 .Vane or deflector  
415/208.2 ..Plural and arcuately or circularly arranged  
in radial plane around runner axis  
415/209.3 ...Having specific vane mounting means

2 435/290.1 (2 OR, 0 XR)  
Class 435 : CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY  
435/283.1 APPARATUS  
435/289.1 .Bioreactor  
435/290.1 ..Composting apparatus

2 439/139 (2 OR, 0 XR)  
Class 439 : ELECTRICAL CONNECTORS  
439/135 WITH CONTACT PREVENTER OR RETRACTABLE COVER  
PART  
439/136 .Movably mounted  
439/137 ..Moved by mating connector  
439/138 ...Moved about an axis  
439/139 ....Connector moved rectilinearly for  
engagement, preventer or cover moved about axis parallel  
to  
direction of connector movement

2 473/354 (0 OR, 2 XR)  
Class 473 : GAMES USING TANGIBLE PROJECTILE  
473/131 GOLF  
473/351 .Ball  
473/354 ..Liquid interior

2 473/370 (0 OR, 2 XR)  
Class 473 : GAMES USING TANGIBLE PROJECTILE  
473/131 GOLF  
473/351 .Ball  
473/367 ..Interior includes injected or compressed  
material  
473/370 ...Diverse layer between shperical core and  
cover

2 473/374 (2 OR, 0 XR)  
Class 473 : GAMES USING TANGIBLE PROJECTILE  
473/131 GOLF  
473/351 .Ball  
473/371 ..Particular unitary or layered construction  
473/374 ...Diverse layer between spherical core and

10724759\_CLSTITLES  
cover

2 524/908 (0 OR, 2 XR)  
Class 524 : SYNTHETIC RESINS OR NATURAL RUBBERS -- PART  
OF THE CLASS 520 SERIES  
524/908 COMPOSITION HAVING SPECIFIED SHAPE, E.G., ROD,  
STICK, OR BALL, ETC., AND OTHER THAN SHEET, FILM, OR FIBER

R

2 525/232 (0 OR, 2 XR)  
Class 525 : SYNTHETIC RESINS OR NATURAL RUBBERS -- PART  
OF THE CLASS 520 SERIES  
525/50 .MIXING OF TWO OR MORE SOLID POLYMERS; MIXING  
OF SOLID POLYMER OR SICP WITH SICP OR SPFI; MIXING OF

SICP

A

F THE

ABOVE OPERATIONS

525/55 ...At least one solid polymer derived from  
ethylenic reactants only  
525/191 ...Polymer mixture of two or more solid  
polymers derived from ethylenically unsaturated reactant  
S  
1  
Y  
only; or mixtures of said polymer mixture with a chemical  
treating agent; or products or processes of preparing an  
of the above mixtures  
525/232 ....Solid polymer derived from reactant  
containing at least two ethylenic groups and is devoid of  
aryl ring

2 525/236 (0 OR, 2 XR)  
Class 525 : SYNTHETIC RESINS OR NATURAL RUBBERS -- PART  
OF THE CLASS 520 SERIES  
525/50 .MIXING OF TWO OR MORE SOLID POLYMERS; MIXING  
OF SOLID POLYMER OR SICP WITH SICP OR SPFI; MIXING OF

SICP

A

OF THE

ABOVE OPERATIONS

525/55 ...At least one solid polymer derived from  
ethylenic reactants only  
525/191 ...Polymer mixture of two or more solid  
polymers derived from ethylenically unsaturated reactant  
ts  
al  
ny  
only; or mixtures of said polymer mixture with a chemical  
treating agent; or products or processes of preparing an  
of the above mixtures  
525/232 ....Solid polymer derived from reactant

10724759\_CLSTITLES  
containing at least two ethylenic groups and is devoid o

f

aryl ring

525/236 ....At least two polymers derived from  
reactants containing two or more ethylenic groups and  
devoid of an aryl ring

2 525/237 (0 OR, 2 XR)

Class 525 : SYNTHETIC RESINS OR NATURAL RUBBERS -- PART  
OF THE CLASS 520 SERIES

525/50 .MIXING OF TWO OR MORE SOLID POLYMERS; MIXING  
OF SOLID POLYMER OR SICP WITH SICP OR SPFI; MIXING O  
F SICP  
H A  
F  
OF THE  
nts  
cal  
any  
of

ABOVE OPERATIONS

525/55 ..At least one solid polymer derived from  
ethylenic reactants only

525/191 ...Polymer mixture of two or more solid  
polymers derived from ethylenically unsaturated reacta  
only; or mixtures of said polymer mixture with a chemi  
treating agent; or products or processes of preparing  
of the above mixtures

525/232 ....Solid polymer derived from reactant  
containing at least two ethylenic groups and is devoid

aryl ring

525/236 ....At least two polymers derived from  
reactants containing two or more ethylenic groups and  
devoid of an aryl ring

525/237 .....At least one of these polymers is derived  
from two or more reactants

2 D23/366 (0 OR, 2 XR)

Class D23 : ENVIRONMENTAL HEATING AND COOLING; FLUID  
HANDLING AND SANITARY EQUIPMENT

D23/314 HEATING OR COOLING

D23/355 .Air treatment

D23/366 ..Deodorizer or ozonizer (28)